



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,567	08/19/2003	Tongbi Jiang	303.343US8	4912

21186 7590 10/10/2006

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
P.O. BOX 2938
MINNEAPOLIS, MN 55402

EXAMINER

LAMB, BRENDA A

ART UNIT PAPER NUMBER

1734

DATE MAILED: 10/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/643,567

Applicant(s)

JIANG ET AL.

Examiner

Brenda A. Lamb

Art Unit

1734

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 July 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 8-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 8-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 7/10/2006.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/10/2006 has been entered.

It is noted that applicant requested that the examiner consider an IDS filed 5/28/2004. A review of the contents of the application indicates that the above cited IDS, received by the office on 5/28/2004, was considered by the examiner and was attached to the office action mailed 2/03/2005.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 4, 8 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dreyfus in view of Cahne.

Dreyfus teaches an apparatus/device which is a sheet of material having a top and bottom surface and a plurality of apertures in a desired pattern. Dreyfus teaches the material of construction of the perforated sheet includes a wide variety of metal materials including stainless steel, aluminum and the like which are known to be impervious to a printable adhesive or printable material and which is identical to the material of construction disclosed by applicant at page 9 lines 6-11 thereby inherently capable of serving as a material of construction for a semiconductor die stencil. Dreyfus fails to teach a polymer coating is applied to one side of the perforated sheet. However, Cahne teaches an apparatus/device which is comprised of a sheet of material having a polymer coating applied only on one side. Cahne teaches providing a coating of polytetrafluoroethylene on the sheet of material which is identical to the coating disclosed by applicant thereby inherently providing the claimed property of retarding the spread of printable adhesive. Cahne fails to teach the sheet of material having a plurality of apertures defining a desired pattern. However, it would have been obvious to modify the Dreyfus sheet of material with a plurality of apertures in a desired pattern to provide a coating only on one side of the sheet since Cahne teaches providing a coating of polytetrafluoroethylene which is the coating disclosed by applicant only on one side of the sheet of material to prevent sticking of material being treated to the recited surface. The recitation of the intended end use of the claimed apparatus/device to be aligned above a die such that the bottom surface of the claimed apparatus/device faces the die

and the apertures of the claimed apparatus/device to define a desired pattern of application of printable adhesive does not structurally further limit the claimed device/apparatus over the above recited combination of references since Dreyfus in view of Cahne teaches each of the structural elements of the claimed apparatus/device. Note it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ 2d 1647 (1987). "[A]pparatus claims cover what a device is, not what a device does." Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990). Thus claims 1, 4, 8 and 11 are obvious over the above recited references.

Claims 2-3 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dreyfus in view of Cahne and Johnson.

Dreyfus and Cahne are applied for the reasons noted above. Dreyfus teaches the material of construction of the perforated sheet includes a wide variety of metal materials including stainless steel, aluminum and the like. Applicant has indicated at page 9 lines 12-22 of the instant specification that the surface tension of most polymers is one order less than that of metals or ceramics. Therefore, it would have been obvious to construct the Dreyfus device/apparatus from aluminum since Johnson teaches aluminum is a preferred material of construction for used in a similar environment as Dreyfus for the obvious advantage of using aluminum, cost and light weight and the surface tension of the materials in the modified Dreyfus device/apparatus within the

scope of claims 2-3 and 9-10 given the disclosure that polymers have a surface tension one order less than that of metal.

Claims 2-3 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dreyfus in view of Cahne and Chen.

Dreyfus and Cahne are applied for the reasons noted above. Dreyfus teaches the material of construction of the perforated sheet includes a wide variety of metal materials including stainless steel, aluminum and the like. Applicant has indicated at page 9 lines 6-22 of the instant specification that the surface tension of most polymers is one order less than that of metals or ceramics and given the disclosure of the surface tension of stainless steel versus polytetrafluoroethylene. Therefore, it would have been obvious to construct the Dreyfus device/apparatus from aluminum since Chen teaches stainless steel is a preferred material of construction for used in a similar environment as Dreyfus for the obvious advantage of using stainless steel, increased working life as a result of corrosion resistance, and the surface tension of the materials in the modified Dreyfus device/apparatus are within the scope of claims 2-3 and 9-10 given the disclosure that polytetrafluoroethylene polymers have a surface tension one order less than that of stainless steel metal.

Claims 1-4 and 8-11 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 10-13, 43 and 46-49 of co-pending Application No. 10/630,544.

The obviousness-type double patenting rejection as set forth in the last office action as set forth in the office action mailed 8/23/2005 is maintained.

Claims 1-4 and 8-11 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-46 of U.S. Patent No. 6,607,599 (Jiang et al) of claims 1-15 of U.S. Patent No. 6,599,365 (Jiang et al).

The obviousness-type double patenting rejection as set forth in the last office action as set forth in the office action mailed 8/23/2005 is maintained.

Claims 1-4 and 8-11 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-77 of U.S. Patent No. 6,669,781 (Jiang et al) of claims 1-24 of U.S. Patent No. 6,641,669 (Jiang et al).

The obviousness-type double patenting rejection as set forth in the last office action as set forth in the office action mailed 8/23/2005 is maintained.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Applicant's arguments filed 7/10/2006 have been fully considered but they are not persuasive.

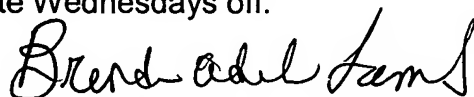
Applicant's argument that unlike Masham Dreyfus perforated plate is incapable of providing the pattern required to apply adhesive to a semiconductor die is found to be non-persuasive since it is not commensurate in scope with claim limitations with claims directed to a desired pattern which is not limited to one for production of semiconductor pattern as argued by applicant.

Art Unit: 1734

Applicant's argument that Cahne doesn't teach coating a sheet of material rather teaches coating a cooking utensil is found to be non-persuasive since Cahne teaches coating metal blanks and forming them into the desired shape.

Applicant's argument that Dreyfus and Cahne are non-analogous art is found to be non-persuasive. Applicant's claims are directed to a sheet of material having a top surface and bottom surface, the sheet of material being constructed from a material which is impervious to a printable coating which is an adhesive applied thereto, a plurality of apertures in a sheet of material defining a desired pattern and a coating applied only to the bottom surface of the sheet to retard spreading of printable coating which is an adhesive. Contrary to applicant's arguments it is deemed that the combination of Dreyfus and Cahne teaches every positively claimed element of the apparatus and therefore deemed to be analogous art.

Any inquiry concerning this communication should be directed to Brenda A. Lamb at telephone number (571) 272-1231. The examiner can normally be reached on Monday-Tuesday and Thursday-Friday with alternate Wednesdays off.



Brenda A Lamb
Examiner
Art Unit 1734